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10/581,897	06/05/2006	David Alan Clark	BA9323 US PCT	1909
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Linda D Birch				
E I du Pont de Nemours and Company				
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Wilmington, DC 19898				
EXAMINER				
RAO, DEEPAK R				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/581,897

Applicant(s)

CLARK ET AL.

Examiner

Deepak Rao

Art Unit

1624

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-17 is/are allowed.
- 6) ☒ Claim(s) 1-14 and 18-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SG/IC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 20060922, 20071019 & 20071113

DETAILED ACTION

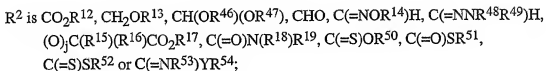
Claims 1-45 are pending in this application.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 9-14, and 29-45 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a compound of Formula I wherein:



does not reasonably provide enablement for a compound of Formula I wherein R^2 is $((\text{O})_j\text{C}(\text{R}^{15})(\text{R}^{16}))_k\text{R}$ wherein R is a **herbicidally effective derivative of CO_2H** . The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

The specification fails to enable the preparation of the entire scope of the claimed compounds. The process schemes 1-10 and the Examples in the specification provide the essential starting materials to prepare the claimed compounds of Formula I wherein R^2 is a specific group selected from:

R^2 is CO_2R^{12} , $\text{CH}_2\text{OR}^{13}$, $\text{CH}(\text{OR}^{46})(\text{OR}^{47})$, CHO , $\text{C}(=\text{NOR}^{14})\text{H}$, $\text{C}(=\text{NNR}^{48}\text{R}^{49})\text{H}$,
 $(\text{O})_j\text{C}(\text{R}^{15})(\text{R}^{16})\text{CO}_2\text{R}^{17}$, $\text{C}(=\text{O})\text{N}(\text{R}^{18})\text{R}^{19}$, $\text{C}(=\text{S})\text{OR}^{50}$, $\text{C}(=\text{O})\text{SR}^{51}$,
 $\text{C}(=\text{S})\text{SR}^{52}$ or $\text{C}(=\text{NR}^{53})\text{YR}^{54}$;

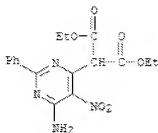
(as recited in claim 2), however, there is no disclosure of the sources of starting materials needed to prepare for compounds wherein R^2 is $((\text{O})_j\text{C}(\text{R}^{15})(\text{R}^{16}))_k\text{R}$ wherein R is a herbicidally effective derivative of CO_2H . The specification provides processes of preparing the compounds wherein R^2 is the specific substituent, however, does not provide any explanation or sources such that a person of ordinary skill could determine if a particular group is suitable to be a herbicidally effective derivative of CO_2H for the claimed structural formula. The specification at page 10 provides that 'the substituent R is defined as any salt, ester, etc.', however, the specification does not provide sufficient guidance as to what is encompassed by the recitation in the claim. In view of the lack of direction provided in the specification regarding starting materials, the lack of working examples and the general unpredictability of chemical reactions, it would take an undue amount of experimentation for one skilled in the art to make the claimed compounds and therefore practice the invention. The starting material sources necessary to obtain the instant compounds must have been available as of the filing date in order to provide an enabling disclosure. See *In re Howarth*, 654 F.2d 103, 210 USPQ 689 (CCPA 1981); *Ex parte Moersch*, 104 USPQ 122 (POBA 1954). Applicants should show that the sources of these starting materials was common knowledge or readily available at the time of filing.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-14 and 18-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The following reasons apply:

1. In claim 1, in the definition of R, it is not clear what is intended by "a herbicidally effective derivative of CO₂H". The specification does not provide sufficient explanation of the term.
2. Claim 1 recites the limitation "provided that: (b) when **R² is CH₂OR^a** wherein R^a is H, optionally substituted alkyl or benzyl, then R³ is other than cyano" in page 145, lines 18-19. There is insufficient antecedent basis for this limitation in the claim. The claim does not provide that R² can be represented by the term CH₂OR^a and there is no recitation of the term "R^a" in the claim before the exclusionary proviso. It is not clear, how an embodiment is excluded without being included in the claim.
3. Claim 1 recites the limitation "provided that: (c) when R¹ is cyclopropyl , then **R is other than C(=W)N(R^b)S(O)₂-R^c-R^d** wherein" in page 145, lines 24-31. There is insufficient antecedent basis for this limitation in the claim. The claim does not provide that R can be represented by the term C(=W)N(R^b)S(O)₂-R^c-R^d and there is no recitation of the terms "R^b, R^c, R^d" in the claim before the exclusionary proviso. It is not clear, how an embodiment is excluded without being included in the claim.
4. Claim 1 recites that limitation "provided that: (f) the compound of Formula I is other than diethyl 6-amino-5-nitro-2-phenyl-4-pyrimidinemalonate" in page 145, lines 32-33. There is insufficient antecedent basis for this limitation in the claim. The compound recited in (f) has the following structural formula:



In claim 1, the 4-position substituent R^2 is defined as $((O)C(R^{15})(R^{16}))_nR$, which does not appear to equate to “diethylmalonate group” of the excluded compound. Appropriate explanation and/or clarification are required.

5. Claim 2 recites the limitation " R^2 is ..., CH_2OR^{13} , $CH(OR^{46})(OR^{47})$, CHO , $C(=NOR^{14})H$, $C(=NNR^{48}R^{49})H$, ... $C(=O)N(R^{18})R^{19}$, $C(=S)OR^{50}$, $C(=O)SR^{51}$, $C(=S)SR^{52}$ or $C(=NR^{53})YR^{54n}$ in lines 2-4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 10-14, and 29-45 rejected under 35 U.S.C. 103(a) as being unpatentable over Wolfgang et al., DE 3807532 (cited in IDS). The reference teaches a generic group of pyrimidine compounds, which embraces applicant's instantly claimed compounds. See formula (I) in page 2 wherein R₁ is haloalkyl. The reference discloses several compounds having a C₃-haloalkyl group in Table 1 (see starting page 21). The compounds are taught to be useful as herbicidal agents, see the abstract. The instant claims differ from the reference by a genus which encompasses the reference disclosed compounds. It would have been obvious to one having ordinary skill in the art at the time of the invention to select any of the species of the genus taught by the reference, including those instantly claimed, because the skilled chemist would have the reasonable expectation that any of the species of the genus would have similar properties and, thus, the same use as taught for the genus as a whole i.e., as herbicides. One of ordinary skill in the art would have been motivated to select the claimed compounds from the genus in the reference since such compounds would have been suggested by the reference as a whole. It has been held that a prior art disclosed genus of useful compounds is sufficient to render prima facie obvious a species falling within a genus. *In re Susi*, 440 F.2d 442, 169 USPQ 423, 425 (CCPA 1971), followed by the Federal Circuit in *Merck & Co. v. Biocraft Laboratories*, 847 F.2d 804, 10 USPQ 2d 1843, 1846 (Fed. Cir. 1989).

Duplicate Claims

Applicant is advised that should claims 32 and 33 be found allowable, claims 41 and 42 (respectively) will be objected to under 37 CFR 1.75 as being a substantial duplicates thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Claims 41 and 42 recite an 'effect' or characteristic of the composition of claims 32 and 33 respectively and do not further limit the base claims.

Allowable Subject Matter

Claims 15-17 are allowed. Claims 18-28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The references of record do not teach or fairly suggest the instantly claimed compounds.

Note: Applicant's attention is directed to U.S. Patent No. 7,300,907 and U.S. Patent Application Publication 2008/0091016 which while are not competent references against the instantly claimed invention, claim subject matter that is substantially similar to that claimed herein, see the claims in each of the above published documents. Unless applicants can demonstrate that the instant claims are patentably distinct from the claims in this US patent, the only way to overcome these patents is by way of interference proceedings or removal of the conflicting subject matter. See MPEP § 2306.

Receipt is acknowledged of the Information Disclosure Statements filed on September 22, 2006; October 19, 2007 and November 13, 2007 and copies are enclosed herewith.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deepak Rao whose telephone number is (571) 272-0672. The examiner can normally be reached on Monday-Friday from 8:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson, can be reached at (571) 272-0661. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**/Deepak Rao/
Primary Examiner
Art Unit 1624**

February 24, 2009